ENVIRONMENTAL ASSESSMENTS OF DEVELOPMENT PROJECTS: A PRELIMINARY REVIEW OF A.I.D.'S EXPERIENCE

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The views and interpretations expressed in this report are those of the author and should not be attributed to the Agency for International Development.

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FOREWORD

The Expert Group on Aid Evaluation of the Development Assistance Committee, Organization for Economic Cooperation and Development, recently conducted a study on how multilateral and bilateral donor agencies address and integrate environmental issues in designing and evaluating their projects. The Center for Development Information and Evaluation (CDIE) responded to their request for information about the Agency for International Development's (A.I.D.) experience by submitting this paper. The paper summarizes the procedures adopted by A.I.D. to ensure that environmental consequences associated with projects sponsored by the Agency are assessed and, if necessary, appropriate safeguards are adopted to mitigate any foreseeable negative environmental effects. It also discusses the lessons drawn from A.I.D.'s experience in implementing the procedures. This paper is being reproduced for use by A.I.D. staff to help stimulate their thinking on the issues raised by the author.

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1. INTRODUCTION

Since the late 1970s, donors as well as host country governments have become increasingly aware of the need to address two issues: how to reverse the process of environmental degradation that has occurred in many developing countries; and how to prevent, or at least mitigate, negative effects of agricultural development and other development activities on the environment.

A.I.D. employs two strategies to support host country efforts to address these issues. First, the Agency has substantially increased funding for development projects that address environmental problems and protect natural resources. They range from projects to rehabilitate or protect watersheds, tropical forest lands and lands with fragile ecosystems, to projects to promote agricultural practices that emphasize soil and water conservation techniques. Many of the projects include components to develop the institutional capacity of developing countries to address environmental issues. Second, A.I.D. projects are screened to ensure that environmental consequences associated with proposed activities are assessed prior to their final approval. Where appropriate, safeguards are adopted to mitigate any foreseeable negative environmental effects.

The screening procedures adopted by A.I.D. are a legal requirement and constitute section 118 of the I981 Amendment of the Foreign Assistance Act. However, in practice, the procedures -- also known as 22 CFR, Part 216, and commonly referred to as "Regulation 16" -- have been observed by the Agency since I976. This paper describes key features of the Regulation 16 procedures and discusses lessons and issues drawn from A.I.D.'s experience in implementing them.

2. SUMMARY OF A.I.D.'S ENVIRONMENTAL PROCEDURES (REGULATION 16)

2.1 Purpose of Procedures

As stated in the introduction to Section 118(b) of the Foreign Assistance Act (I981 Amendment), the set of environmental procedures it stipulates serves two purposes:

- -- "to ensure that environmental factors and values are integrated into the A.I.D. decision making process"
- -- "to assign responsibility within the Agency for assessing the environmental effects of A.I.D.'s actions"

The procedures essentially provide guidance to A.I.D. on the types of development activities that should be reviewed, what action should be taken in the review process, and what issues should be addressed for activities that can have "a significant effect on the environment." They are summarized in the following sections.

Each of the three A.I.D. Regional Bureaus has a Bureau Environmental Officer who is responsible for overseeing the implementation of the procedures at the USAID Mission level and for the clearance of projects for which environmental reviews are required. These officers work closely with their respective colleagues -- Environmental Officers -- in the regional offices and USAID Missions. The Agency also has an Environmental Coordinator and General Counsel responsible for monitoring the review process and advising the A.I.D. Administrator on implementation problems and on general environmental issues.

2.2 Which Projects Should Be Reviewed: Initial Screening

Initial screening of projects has to be performed by the designers of the project (e.g., USAID Mission, host country institution, private voluntary organization). Screening involves a simple step: using Regulation 16 as a guide to determine whether a project qualifies for a "categorical exclusion" or requires an environmental review (namely, an initial environmental examination, an environmental assessment, or an environmental impact statement). Regulation 16 identifies three broad categories that cover all of A.I.D.'s development activities:

- -- Activities whose environmental consequences are significant. An environmental assessment or environmental impact statement, and adoption of appropriate mitigation measures, is required for projects or programs in this category (see Section 2.3). Popularly referred to as the "black list," these activities comprise the following:
 - Programs of river basin development
 - Irrigation or water management projects, including dams and impoundments
 - Agricultural land leveling
 - Drainage projects
 - Large-scale agricultural mechanization
 - New lands development
 - Resettlement projects
 - Penetration road-building or road-improvement projects
 - Power plants
 - Industrial plants
 - Potable water and sewerage projects other than those that are small scale
 - Projects that include assistance for procurement or use of pesticides registered with the U.S.
 Environmental Protection Agency for similar uses without restriction

- -- Activities that qualify for a "categorical exclusion" (i.e., requiring no environmental review). Such activities are mainly related to research, training, extension, and institution-building projects. This category also includes multidonor projects and projects implemented by private voluntary organizations and other intermediary organizations to which A.I.D.'s contribution is less than \$I million or less than 25 percent of the total project cost. These activities are commonly referred to as the "white list." Normally, a written statement supporting the application of a "categorical exclusion" is sufficient to obtain approval.
- -- Activities in the "categorical exclusion" category that might nevertheless have negative environmental consequences. For activities to be placed in this category, a written statement is required proving that the environmental effects will be insignificant. If the information in the statement is insufficient to satisfy conditions for a "categorical exclusion," an initial environmental examination will be required (see Section 2.3.1).

2.3 What To Examine: Types of Environmental Reviews

As indicated above, a project that does not qualify for a "categorical exclusion" will be subject to an environmental review appropriate for its activities (i.e., an initial environmental examination, an environmental assessment, or an environmental impact statement). The three types of reviews and related procedures that must be followed are specified in Regulation 16. Their key features are as follows.

2.3.1 Initial Environmental Examination

The initial environmental examination involves three procedures. First, a preliminary study is conducted to identify "foreseeable effects of a proposed action on the environment." The study is usually undertaken by USAID Mission in-house staff (e.g., the Mission's environmental officer) or the project designers. Second, based on the findings, a statement recommending either a "negative" or "positive" threshold decision is submitted to the Bureau Environmental Officer. Third, the Bureau Environmental Officer reviews the statement and either accepts or rejects the recommendation.

A "negative" threshold decision means that the project will not have a significant effect on the environment. A "positive" determination means the opposite and would require project designers to follow the procedures for conducting an environmental assessment or preparing an environmental impact statement,

2.3.2 Environmental Assessment

An environmental assessment is defined as "a detailed study of the reasonable foreseeable significant effects, both beneficial and adverse, of a proposed action on the environment of a foreign country or countries." The purpose of the study is to identify mitigation measures (i.e., environmental safeguards) that should be incorporated into the design of the project to offset or mitigate negative effects on the environment.

Regulation 16 specifies that as part of the preparation for the study, a detailed scope of work should be prepared and circulated through a "scoping process." In practice, this involves holding "scoping sessions" (i.e., meetings to solicit responses from relevant A.I.D. personnel and contractors as well as non-A.I.D. personnel in the host country, including "representatives of host country governments, public and private institutions"). At the discretion of the Bureau Environmental Officer, written comments may also be solicited from other U.S. Federal agencies. The final scope of work has to take into consideration issues and suggestions raised during the scoping sessions and has to be approved by the Bureau Environmental Officer.

Recommendations from the study are subsequently included and submitted for review as an integral part of the Project Paper or equivalent document, after clearance by the Bureau Environmental Officer. Subsequently, the Project Paper or equivalent document is subject to standard A.I.D. review procedures.

2.3.3 Environmental Impact Statement

Environmental impact statements serve the same purpose as environmental assessment studies except that they focus on examining potential environmental effects in a wider context (i.e., "on the United States, the global environment or areas outside the jurisdiction of any nation"). The procedures for preparing environmental impact statements are identical to those for conducting environmental assessments. However, there are two additional provisions. First, if the A.I.D. Administrator deems it necessary, formal public hearings may be held in the United States to discuss draft scopes of work for the environmental studies. Second, environmental impact statements must be reviewed and cleared by the Agency's Environmental Coordinator and the General Counsel.

2.3.4 Pesticide Procedures

Regulation 16 stipulates factors that must be considered in an initial environmental examination and, if necessary, an environmental assessment, or environmental impact statement and the conditions under which the use of hazardous pesticides in A.I.D. projects may be permitted.

2.3.5 Endangered Species

The scope of work for an initial environmental examination, environmental assessment, and environmental impact statement should also determine whether an activity under investigation will have adverse effects on endangered or threatened species and their habitats.

2.4 Monitoring and Evaluation Requirements

The design of any project for which an environmental assessment or environmental impact statement is required has to include provisions for data collection and analysis that would indicate "any changes in environmental quality, positive or negative, during their implementation." The data collected would be used to evaluate the environmental impact of the project and to warn USAID Missions of any unexpected development during project implementation that might adversely affect the environment. An environmental assessment or environmental impact statement would be required if the adverse effect is significant.

2.5 Compliance With Regulation 16

A.I.D.'s system for reviewing projects guarantees compliance with Regulation 16 in two ways:

- -- Approval for funding a project is conditional on the Bureau Environmental Officer's (for initial environmental examinations and environment assessments) or Environmental Coordinator's (for environmental impact statements) concurrence with the USAID Mission's decisions concerning how environmental issues should be addressed in the environmental reviews and in the project's design.
- -- The procedures stipulated by Regulation 16 not only are required by A.I.D. policy but also by U.S. law; therefore, noncompliance could present a legal problem for the Agency.

Problems that may arise over how to interpret Regulation 16 are usually resolved before a project's design is finalized. For example, if a Bureau Environmental Officer has grounds to reject an application for a "categorical exclusion," USAID Missions would usually concede and arrange for an initial environmental examination to be conducted and reviewed prior to final authorization of the project. However, if for some reason

an environmental review cannot be fully completed prior to final authorization for a project, Regulation 16 allows for "appropriate covenants or conditions precedent" to permit obligation of funds for project components that have been reviewed, while witholding funding for those components still under investigation.

3. ISSUES AND LESSONS FROM A.I.D.'S EXPERIENCE

As indicated in the previous section, A.I.D.'s procedural requirements provide specific instructions on how environmental issues should be addressed in designing A.I.D. projects. In implementing these requirements, A.I.D. has gained insights on several issues which should be useful to A.I.D. staff and other donor agencies in guiding their own efforts to design environmental assessment systems. They are summarized below.

3.1 Learning From Environmental Assessments

3.1.1 Timing of Environmental Reviews

Experience has taught most USAID Missions to initiate the environmental review process early in the project identification stage. This approach allows the Missions not only to comply with Regulation 16, but also to buy time to conduct an environmental assessment, if necessary, and to allow project designers to incorporate its recommendations concerning mitigation measures into the project design. In this regard, the environmental assessments can be as effectively used as other project feasibility studies (i.e., as inputs to project design work).

In many cases, timely environmental assessments have influenced decision-making on key aspects of a project's design. For example:

- -- The environmental assessment of the Cairo Wastewater Project indicated that it would be necessary to phase construction activities and recommended several alternatives for the USAID Mission and the Government of Egypt to consider before the engineering design and construction schedule were finalized.
- -- The environmental assessment of ecological conditions in the Palcazu Valley in Peru was instrumental in convincing the USAID Mission and host country government to change the project's development strategy. The original plan centered on road building and encouraging settlers to clear the tropical forests in the area for large-scale, agro-industrial activities. The environmental assessment recommended against the proposed activities and, instead, proposed activities that emphasize natural forest management with very limited small-scale agriculture in the

project area. The recommendations provided the basis for the design of the A.I.D. project being implemented in the valley: the Central Selva Resource Management Project.

3.1.2 Identifying Issues -- Role of Scoping Sessions

A key issue in environmental assessments is how to identify the scope of work for the investigation (i.e., what specific issues should be examined). As indicated in Section 2, A.I.D. addresses this issue by holding scoping sessions within A.I.D. and in the host country. The procedures stated in Regulation 16 might seem complicated, but in practice, scoping sessions are not that different from other meetings routinely held in A.I.D./Washington and the Missions to discuss issues pertaining to the design of new projects. However, there is one important difference. Because scoping sessions are open to representatives of groups who have an interest in how a proposed project will address environmental issues, they, in effect, are public hearings to solicit reaction to, and reach a consensus on, terms of reference for the environmental assessment. In that respect, scoping sessions serve two important purposes:

- They encourage communication between A.I.D., the host country, and the public concerning the issues. In a few cases, scoping sessions provided a mechanism through which opposition to a proposed project was constructively channeled to the host country government. For example, to a large extent, the environmental assessment of the Palcazu Valley in Peru (see Section 3.1.1) was designed to take into consideration the concerns of U.S. and Peruvian environmental groups opposed to the original project concept. In short, scoping sessions give credibility to the whole environmental assessment process by providing a mechanism for airing and resolving controversial issues.
- -- They provide a forum for A.I.D. staff, host country government officials, and the environmental assessment team to clarify specific issues that should be examined, identify data sources, and establish initial contact with the organizations and individuals to be interviewed by the study team.

3.1.3 Cost Considerations

While few USAID Missions question the value of designing environmentally sound projects, many are reluctant to spend more than the minimum necessary for environmental analyses. This reaction at the Mission level is understandable, since many USAID Missions face constant financial constraints, and environmental studies are financed out of grant funds. Nonetheless, proponents of environmental assessments argue that the cost of initial environmental examinations is usually minimal, and

experience indicates that the cost of environmental assessments is not excessive. They point out that the costs of A.I.D. funded environmental assessments vary with the size of projects, most ranging from \$100,000 to \$400,000 for large-scale capital development projects to \$10,000 to \$30,000 for small projects. These figures usually constitute approximately 1 percent or less of the total A.I.D. investment in a project. Therefore, the costs are not only reasonable, but justified investments to ensure that the project designs are environmentally sound. Moreover, costs of environmental assessments can be minimized in several ways:

- -- Timing fieldwork for environmental studies to coincide with that for other feasibility studies, which enables the study teams to minimize the costs of travel and data collection by sharing vehicles and information
- -- Using in-house A.I.D. experts, usually the Regional Environmental Officer and/or other qualified A.I.D. staff, to conduct the studies
- -- Including local experts in study teams (e.g., consultants from local firms or universities)

Since costs of environmental assessments are financed through A.I.D. grants, host country reluctance to support environmental studies because of cost considerations is not an issue. On the contrary, experience indicates that host countries have been very cooperative in hosting scoping sessions and assisting with the studies.

3.1.4 Implementing Mitigation Measures

Most mitigation measures can be directly incorporated into the design of projects if they involve relatively simple steps such as ensuring that engineering or construction activities follow certain standards and safeguards. For example, engineering designs for small-scale irrigation projects might include appropriate measures to prevent or mitigate adverse effects of land clearing and reservoir construction, erosion of watersheds and shorelines, and alterations of natural ecosystems in the area (wildlife and aquatic habitats).

However, where mitigation measures cover many issues which cannot be adequately addressed in the context of a single project, it might be necessary to design, and implement concurrently, separate "companion" projects, each dealing exclusively with one or a few of the issues. In such cases, findings from environmental assessments provide valuable information to guide the planning and design of the projects.

The Mahaweli Environment Project is a classic example of this type of project. It was conceived as a "companion" to a very large irrigation and land settlement project in Sri Lanka --

the Accelerated Mahaweli Development Project (AMP) -- to implement the recommendations of an environmental assessment of the project. The AMP involves constructing four large dams to irrigate over 100,000 hectares of land for agricultural production by new settlers in the project area. The environmental assessment had concluded that a long-term program was necessary to minimize the project's potential detrimental effects on existing wildlife and watersheds and to implement public sanitation and natural resource management projects. The recommendations were incorporated into the Sri Lankan Government's "Environmental Plan of Action for the AMP" and constituted the basis for designing the eight components of the Mahaweli Environment Project. A recent evaluation of the 7-year-old project concluded that despite the management problems that delayed implementation of the various components, nearly all the recommendations of the environmental assessment have been carried out. Various activities have been completed funds provided by many other donors, including CIDA, GTZ, ODA, UNDP/FAO, ADB and the World Bank, Japan, Kuwait, and Saudi Arabia.

3.2 Implementation Constraints

3.2.1 Limits of Compliance -- Projects on the "Grey" List

Compliance with Regulation 16 procedures is not an issue when it involves designing projects on the "black list" (see Section 2.2), for which environmental assessments are required, and when measures for mitigating undesired environmental consequences are known. USAID Missions have learned through experience how to use environmental assessments and the stipulated procedures for such projects as an integral part of the project design process (see Sections 3.1.1 and 3.1.2). Moreover, Bureau Environmental Officers or Regional Environmental Officers usually work closely with USAID Missions on such projects, providing assistance on procedural matters and guidance on technical aspects.

However, compliance can be, and often is, an issue with regard to projects in the "grey" category -- projects which qualify for a "categorical exclusion" unless they include activities which "significantly affect the environment" (see Section 2.2). Many projects in this category include partial support for intermediary institutions whose activities are not under the direct supervision and control of A.I.D. and, therefore, are not subject to standard A.I.D./Washington project review procedures. The projects are instead reviewed and approved at the Mission level, based on a "categorical exclusion" application submitted by the intermediary institution. Experience has shown that unless the intermediary institutions have in-house staff or have access to expertise qualified to make an informed judgment, they may submit -- in good conscience -- a "categorical exclusion" application without understanding what should be declared. To compound the problem, in many USAID Missions, officers responsible for screening the applications are not professionally qualified to make an informed appraisal. Consequently, many projects are subsequently approved without further review.

This is a typical problem with many intermediary credit institutions established with A.I.D. support. Until recently, their activities were not subject to environmental reviews. Rather, they were categorically excluded, based on the rationale that A.I.D. funds were to be used for capitalization of the institution and technical assistance for training programs. Preliminary evidence suggests that in a number of cases, the institutions have become a major source of loans for unconditional purchase of pesticides and toxic chemicals or other activities that clearly violate A.I.D.'s environmental regulations.

As stated in Regulation 16, A.I.D. cannot be held accountable for activities over which the Agency has no direct control. Therefore from a purely legal viewpoint, the environmental implications of the lending activities of the credit institutions are not subject to A.I.D.'s supervision. However, because A.I.D. supports numerous intermediary credit institutions, the question of how to screen their activities cannot be ignored.

In recent years, A.I.D. has addressed this question by training Mission environmental officers to review "categorical exclusions" for projects on the "grey" list more closely, and by organizing workshops and funding technical assistance programs to strengthen the capability of banking and other intermediary institutions to identify and address environmental issues related to their activities. For projects which do not qualify for a categorical exclusion, compliance with A.I.D. environmental regulations is imposed as a condition for A.I.D. support. This effort is beginning to pay off. For example, in Kenya, a private company received partial assistance from A.I.D. to establish a tannery on the condition that it comply with A.I.D.'s regulations concerning effluent disposal. A recent report on the project indicated that the company is the first in Kenya to invest in a state-of-the-art effluent treatment plant and that this demonstrated the company's appreciation of the encouragement and assistance it has received from USAID/Kenya.

3.2.2 Host Country Support

A major lesson from A.I.D.'s experience is that acceptance of environmental review procedures as an integral part of the project design process by the host country is essential to effective implementation of mitigation measures. The mitigation measures are also more likely to be sustained by a government that views them as a justified investment in protecting the environment. In several countries, mitigation measures introduced by A.I.D. projects have been adopted by the host country government as standards for similar activities. For example, as a result of A.I.D.'s assistance in designing the treatment plant for the tannery project in Kenya (see above paragraph), the Kenyan Government has adopted the guidelines used by the project

as standards to be required of the leather industry as a whole. Another example is the commitment shown by the Sri Lankan Government to implementing the mitigation measures recommended by A.I.D.'s environmental assessment for the Mahaweli Development Program (see Section 3.1.4).

Conversely, implementation of A.I.D.'s environmental guidelines has been less effective where the host country is unable to pay more than lip service to A.I.D.'s regulations and is generally uninformed about or, for financial and other reasons, unable to address environmental issues. Experience has indicated that under such circumstances, it is unrealistic to exp

3.2.3 Donor Coordination

Another limitation is that the A.I.D. system applies only to A.I.D.- financed activities. Consequently, A.I.D. often finds itself in a position where it can only put its mouth where its money is. This has occurred in development situations in which A.I.D. was one of several donors approached for support on a project or program. The activities, by A.I.D. standards, were subject to an environmental assessment, which was not welcomed or viewed as necessary by the host country or other donors. In such cases, A.I.D. ended up funding an environmental assessment whose recommendations were addressed only in the A.I.D. componet of the project, but not in those of the other donors.

A more constructive use of A.I.D.'s efforts is possible through multidonor collaborative efforts. For example, although A.I.D. is the major donor to the Mahaweli Environment Project, other donors are supporting several studies and activities recommend in the original environmental assessment. A.I.D.'s contribution to the Cairo Wastewater Project -- a \$ 3 billion project funded by the Egyptian Government, A.I.D., Britain, West Germany, and Japan -- includes a \$ 1.5 million component for the environmental assessment and other studies pertaining to environmental issues. The World Bank has recently incorporated findings from USAID/Madagascar's environmental studies of Madagascar into its own study of Madagascar's natural resources.

4. SUMMARY AND CONCLUSION

A.I.D.'s system for implementing Regulation 16 serves three purposes. First, it provides general guidance for the Agency in its efforts to comply with U.S. law governing A.I.D.'s development activities. Second, it forces USAID Missions and project designers to review and resolve environmental issues presented by a project. Third, through scoping sessions, it encourages communication between A.I.D., the host country, and the public (in the United States and the host country) on the issues.

The purpose of this paper has been to draw attention to the strengths and limitations of the A.I.D. system. The system's strength is that it prescribes a set of procedures which force designers to identify and, if necessary, address significant environmental issues in a project's design. Funds can be delayed or witheld if environmental issues are not adequately addressed by project designers. Experience indicates that the system is generally effective when it involves reviewing projects on the "black list" which are designed and supervised by A.I.D. personnel. On many occasions, the environmental assessments have provided valuable information that improved the design of the project, have identified issues that might otherwise not have surfaced at all, and in several cases, have justified funding "companion" projects specifically designed to address complex environmental issues.

However, the system has its limitations. It is less effective in screening activities indirectly funded by A.I.D., such as the activities of intermediary credit institutions established with A.I.D. assistance. It cannot prevent USAID Missions from adopting a "play safe" strategy in complying with Regulation 16 (i.e., investing only in projects which do not require an environmental assessment). It also cannot guarantee that mitigation measures or environmental safety standards introduced under an A.I.D. project will be sustained or will have a wide impact.

Finally, except for projects for which environmental assessments are required, {1} the system does not provide guidance on how to detect and address unforeseen negative environmental effects that might occur in other projects. Yet experience has indicated that such unpredicted negative environmental effects do occur during project implementation.

In most cases, however, they were not detected because no provision was made to monitor their occurrence. They were discovered serendipitously, and too late, for effective action to be taken. {2}

These shortcomings should not be viewed as an indictment of A.I.D.'s efforts to resolve environmental issues. Rather, they indicate that the A.I.D. system can only deliver what it was designed to do: ensuring that significant environmental consequences of development activities funded by A.I.D. are identified and considered before they are implemented. Nevertheless, they also suggest that the system can be improved by ensuring that Missions have qualified staff to screen projects in the "grey" category and that these projects (as well as those on the "black" list) be routinely monitored for their environmental impact during and after project implementation.

(1) Environmental issues have to be routinely monitored during the implementation of these projects (see Section 2.4).

(2) A recent CDIE review of 212 project evaluations conducted in fiscal years 1985 and 1986 pointed out that 20 percent of the projects had unforeseen environmental impacts, and of these, most were negative and were not adequately addressed. (See Kean et al. 1988).

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